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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The specification also describes hosts transformed with a gene active in glycogen synthesis and at least one non-starch branching gene, involved in production of amylopectin or amylose in its original host. The method is used to produce plant-like starches by fermentation and non-food applications of starch. These starches are useful for all food and non-food applications of starch. The present sequence is used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                         763
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451
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GACCCCAGCAGGGACAAGTACATCGCCGTGAAGTACGACGTGTCGACGGCCGTGGAGGCC
                              AATCCCTCAACAGACAAATACATAACAGCAAATTACGACGCAACCACTGTAATGGAGGCA 1287
                                                                                                         AATATACTGCGCTTGAAAACCATCTGTGGCATCATAAATGGAATGGACACCAACGAGTGG
                                                                                                                                                                       GTGAGCCCATACTATGCCCAGGAACTCGTCTCAGGAATCGATAAGGGCGTCGAGTTGGAC
                                                                                                                                                                                                                                                          AAAGGAAAGGAAAATCAACTGGATGAAGGCGGGAATTATAGAATCAGATCGTGCATTGACT 1107
                                                                       AACATCATGCGCCTCACCGGCATCACCGGCATCGTCAACGGCATGGACGTCAGCGAGTGG
                                                                                                                                                GTCAGCCCCTACTACGCCGAGGAGCTCATCTCCGGCATCGCCAGGGGGCTGCGAGCTCGAC
                                                                                                                                                                                                                         GAAGGCCGGAAGATCAACTGGATGAAGGCCGGGATCCTCGAGGCCGACAGGGTCCTCACC
                                                                                                                                                                                                                                                                                                AACCTCCCGGAGAGATTCAAGTCGTCCTTCGATTTCATCGACGGCTACGAGAAGCCCCGTG
                                                                                                                                                                                                                                                                                                                   AATCTCCCTGATACATTCAAGTCTTCTTTTGATTTCATCGATGGCTATGCAAAACCAATA 1047
                                                                                                                                                                                                                                                                                                                                                                       TTCTGCATCCACAACATCTCCTACCAGGGCCGGTTCGCCTTCTCCGACTACCCGGAGCTG 822
                                                                                                                                                                                                                                                                                                                                                                                              TTCTGCATTCATAATATTTGCGTATCAGGGACGGTTTGCCTTTGAAGATTTTTTGCGTCTC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACCATACGGGAGGGACGTCGTGTTCGTCTGCAACGACTGGCACACCGGCCCTCTCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACCAAAAG----GTGAAGATTTATTCATTGCTAACGATTGGCATACTGCTCTATTACCT
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Pred. No. 4.8e-144;
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AAV28687 standard; cDNA;
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                                                                                                                           GCTCCTCTCGCCAAGGAAAACGTGGCCACTCCATGAA 1978
                                                                                                                                                                                         AAGTTCTTGCTGAGCCTTGGGCTCGAGGGTAGTGAAGCTGGAATTGAAGGCGAGGAAGTA 1941
                                                                                                                                                                                                                                                                                                                                    AAGATTGTGGAAGCAGTGAAGAGAGCCCTTATGGTTTATGGAACGCCTGCTTTCGAGGAG
                                                                                                       GCGCCGCTCGCCAAGGAGAACGTGGCCGCGCCCTGAA
                                                                                                                                                                                                                                                                        ATGATACAGAACTGCATGGCTCAAGATTTCTCCTGGAAGGGGCCCAGCAAAGGAATGGGAG 188
                                                                                                                                                                                                                                                                                                                                                                                GGGTTCCACATGGGCCGCCTCAGCGTCGACTGTAACGTCGTGGAGCCGGCGGACGTCAAG 1602
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                                                                                                                                                                      AACGTGCTGCTCAGCCTCGGGGTCGCCGGCGGGGGGGCCAGGGGTCGAAGGCGAGGAGATC
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   Banana; ripening; pulp; Musa acuminata genetic control; tissue senescence; ss.
                                              Ripening banana pulp cDNA clone U-D112 SEQ
                                                                                                                      AAV28687;
                                                                                 29-JUL-1998
                                                                                   (first entry)
tissue senescence;
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CV.

Grand Nain; ID NO:45

Musa acuminata 25-APR-1997; 10-SEP-1996; 08-SEP-1997; 19-MAR-1998 WO9811228-A2 97GB-0008366. 96GB-0018862. 97WO-GB02424 SS

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1806 GCCTGCTTTCGAGGAGATGATACAGAACTGCATGGCTCAAGATTTCTCCTGGAAGGGGCC 1865
                                                                                                                                                                                                                                                                                                                                    1626
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                                                                                                                                                                                                                            1686 CAAAGAAGGCATCACAGGTTTCCACATGGGTCCCTTCAGTGTGGAGTGCGACATTGCCGA 1745
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 813 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence represents a cDNA clone isolated from ripening banana pulp. 57 clones were isolated and are given in AAV28643 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 46-47; 72pp; English
                                                                           317 TAAAGATGATGTACAAAAAGTCATTCAGACAGTGAAAAGGGCCCTTAAAGTTTACGGCAC
                                                                                                                                                                                                                                                                                                                                                                                     497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          616
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                                                                                                                            CGAGGCCGACGTGCTAAAGATTGTGGAAGCAGTGAAGAGAGCCCCTTATGGTTTATGGAAC 1805
                                                                                                                                                                             CATAGAAGGCATCACAGGGTTTCATATGGGTCCCTTCAATCCTGATTGTGATGTTGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                       GGTGCTGATATCCTTGTTATTCCCAGTAGGTTCGAACCATGCGGTCTCATTCAGC-TCCA 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAGACAAATTCAGAGCTCATATGAAGTTCAATATTCCTTTGGCTCATGGAATCATGGCG 1566
                                                                                                                                                                                                                                                                                GGGCATGCGATATGGAATTCCCCCCCATGTGCGCAACAACTGGTGGACTTGCTGACACTGT
                                                                                                                                                                                                                                                                                                                              GGGCATGAGATACGGAACCCCTTCCATGTGCACCACGACTGGTGGGCTCGTCGACACTGT 1685
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCAATAAAGTGAGAGCACATATGAAGTTTAATGCACCTTTGGNTCATGAAATCATGGCT 498
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of (1).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RDJ, · Seymour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 359; DB 19;
Pred. No. 2.2e-67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    148 G; 238 T; 13 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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1

밁 20

Matches Query Match

Similarity

14.5%;

Score 320; Pred. No. 4.

DB 19; 4.9e-59;

Length 790; Indels

14;

Gaps

ū

Conservative

0;

Mismatches

134 CCATGCCTTCTGTGACTGCATCACATTCATTGCTAAAAACCCCATGCTCCAGCTACAATG 193

44 CAATGGCTGCTAACAAAGTCACAATTCATCTCGAAAGGCTCATGCGCTGGCTATGGGG 103

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RESULT 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                selecting from the transformed regenerants, plants with modulated ribening or tissue senescence characteristics. Also described in the present invention are: (1) plants, their progeny, seed and material obtained from the plants, produced by the above method; (2) a vector functional in plants comprising a promoter region which is operably in plant cells, a polynucleotide sequence as defined above, and a transcription termination sequence; and (3) a method of controlling plant pathogens comprising the application of anti-pathogenic agent to
                                                                                                                                                                                                                                                                                                                                  The present sequence represents a cDNA clone isolated from ripening banana pulp. 57 clones were isolated and are given in AAV28643 to AAV28699. The cDNA clone sequences can be used in a method of modulating
                                                                                                                                                                                                                                                             ripening or tissue senescence process in plants of the genus Musa. The method comprises: (a) inserting into the plant material at least 1 of the 57 sequences (as above); (b) regenerating the plant material, and (c)
Sequence 790
                                                 plants of (1).
                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 46; 72pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Modulation of ripening or tissue senescence in bananas - comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-207389/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bird CR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Musa acuminata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         genetic control;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Banana;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ripening banana pulp cDNA clone U-D111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV28686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV28686 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use of DNA isolated from ripening banana pulp to produce genetically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ZENE ) ZENECA LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGATGCTGATGAAATAGCTCCTCTTGCAAAGGAAAATGTGGCCCACTCCCTGAAAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAAAGGAATGGGAGAAGTTCTTGCTGAGCCTTGGGCTCGAGGGTAGTGAAGCTGGAAT 1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAAGGCGAGGAAGTAGCTCCTCTCGCCAAGGAAAACGTGGCCCACTCCATGAAACTGA 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCTAAGAAGTGGGAGCAATTTNTCCTAAGCTTAGGAGCTGCTGGTAGTGAAGCCCGGCAT 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTGCATTTGCTGAGATGATACAGAACTGCATGACTCAAGACCTCTCCTGGAAGGGACC 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ripening; pulp; Musa acuminata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Medina-Suarez RDJ,
  BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97GB-0008366.
96GB-0018862.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-GB02424
  220 A; 153 C; 204 G; 201 T; 12 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tissue senescence;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA; 790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seymour GB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cv. Grand Nain; fruit;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO:44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
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